

AMENDMENTS

In the Claims:

Please amend Claims 16 and 22 as follows:

*B1 C*  
--16. (Twice amended) A method of observing the effect of one or more candidate compounds on cells in a microfluidic device comprising:

- (a) providing a microfluidic device comprising a main flow path comprising a detection zone, and an outlet and at least two inlet flow paths intersecting and merging with the main flow path at or upstream of the detection zone;
- (b) applying into the microfluidic device at least one cell which [is capable of flowing in the microfluidic device to] flows into a first inlet flow path and a candidate compound to a second inlet flow path;
- (c) inducing flow of the cells and the candidate compound toward the outlet;
- (d) allowing the cells to mix with the candidate compound; and
- (e) observing the effect of the candidate compound on the cells in the detection zone.

*B2*  
22. (Amended) The method of claim [21] 16 wherein the candidate compound being studied is an inhibitor, and the cells are lymphocytes.--

In the Specification:

At page 1, line 9-10, please delete --and are hereby incorporated by reference in their entirety --.

At page 18, line 1, please replace "calcein-AM, Fluo-3, Fura-2, Indo-1, Quin-2" with --CALCEIN-AM, FLUO-3, FURA-2, INDO-1, QUIN-2--.